

REMARKS**Summary of the Office Action**

In the Office Action, the drawings stand objected to under 37 C.F.R. § 1.83(a) for particular informalities.

The abstract of the disclosure is objected to as allegedly not sufficiently describing the invention.

A new title of the invention is required because the current title is allegedly “not descriptive.”

The specification is objected to as allegedly failing to provide proper antecedent basis for the claimed subject matter.

Claims 11, 13, 14 and 16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,734,132 to Proni (hereinafter “Proni”).

Claims 12 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Proni in view of U.S. Patent No. 5,850,462 to Sakamoto et al. (hereinafter “Sakamoto”).

Summary of the Response to the Office Action

Applicants have newly-amended claims 11 and 14 to differently describe the invention. Accordingly, claims 11-16 remain pending. The Title and Abstract have been amended.

New Title Requirement

A new title of the invention is required because the current title is allegedly “not descriptive.” In response, Applicants have amended the title to read as follows: “A METHOD

FOR MANUFACTURING A SPEAKER APPARATUS.” In particular, Applicants have implemented the Examiner’s helpful suggestion of a new title at page 2, section 3 of the Office Action. Accordingly, withdrawal of the requirement for a new title is respectfully requested.

Objection to the Abstract

The abstract of the disclosure is objected to as allegedly not sufficiently describing the invention. In response, Applicants have amended the abstract in response to the Examiner’s comments at page 2, section 2 of the Office Action. Accordingly, withdrawal of the objection to the abstract is respectfully requested.

Drawing and Specification Objections

In the Office Action, the drawings stand objected to under 37 C.F.R. § 1.83(a) for particular informalities. The Office Action states that “the ‘a positioning portion provided on a diaphragm’ recited in line 6 of claim 11 and ‘a positioning member’ recited in line 6 of claim 14 must be shown [in the drawings] or the feature(s) canceled from the claim(s).” Accordingly, corrected drawings are required. For similar reasons, the specification is objected to as allegedly failing to provide proper antecedent basis for the claimed subject matter.

Applicants respectfully traverse these objections to the drawings and specification, and the associated requirement for new drawings and requirement for correction of the specification, for at least the following reasons. In particular, the “positioning portion” of claim 11 and the “positioning member” of claim 14 refer to the holder, shown and indicated, for example, by reference numeral 3 in Figs. 1, 3-4, 7B-7C and by reference numeral 16 in Fig. 10.

Applicants respectfully submit that the specification describes these features, for example, at page 13, lines 5-9, which explains how Fig. 1 illustrates a holder 3 that is fixed to the diaphragm 1 near the center at the back side of the diaphragm. Moreover, page 14, line 18 – page 15, line 14 explains how the holder 3 of Fig. 3 includes a ring-like protruding guide 3a that is designed so that a jig 14 can be removably attached to the guide 3a. Also, a guide hole 3c on the holder is disclosed as being provided to engage with the holder mounting portion 1a of the diaphragm 1.

Moreover, the maximum outer diameter of the holder 3 is disclosed as being designed such that the holder 3 can be mounted at a region of the diaphragm surrounded by the holder mounting portion 1b. Page 15 of the specification goes on to explain how Fig. 4 shows a state in which the diaphragm 1 and jig 14 are fitted to the holder 3. Also, the specification, at page 15, line 8 explains how the diaphragm 1 and the holder 3 are bonded to each other, for example, with an adhesive agent. See also, page 19, lines 1-9 and 17-21, and page 20, lines 9-18, for example, for additional discussions of the interrelationships between the diaphragm, the holder and the jig of the instant application.

Additionally, Applicants refer the Examiner to the parent application (Serial No. 09/046,605) of the instant application, in which the allowed claims have similar “positioning portion” and “positioning member” limitations.

Accordingly, for at least the foregoing reasons, Applicants request withdrawal of the objection to the drawings and the specification.

Rejections under 35 U.S.C. §§ 102(b) and 103(a)

Claims 11, 13, 14 and 16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,734,132 to Proni. Claims 12 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Proni in view of Sakamoto. Applicants note that Proni does not qualify under 35 U.S.C. § 102(b) because its issue date of March 31, 1998 is not more than one year prior to the effective filing date of the instant application, which is a divisional of a prior application filed on March 24, 1998. However, to the extent that Proni might be applied under some other section of § 102, Applicants respectfully traverse the rejection as follows.

The Office Action alleges that Proni teaches all of the limitations of independent claims 11 and 14. Applicants respectfully traverse this allegation for at least the following reasons. Proni discloses a loudspeaker arrangement that includes a concentric tube 40 suspension system for stabilizing and centering the voice coil 22 in a magnetic gap. The Office Action cites to Fig. 5 of Proni with regard to the rejection of independent claims 11 and 14. Fig. 5 of Proni illustrates a spider 30, which serves as a damper, connected between the speaker frame 18 and the concentric tube 40.

Proni discloses that by providing its concentric tube 40, the distance between the top suspension 16 and the spider 30 can be increased, thus improving the overall stability of the speaker arrangement, as compared to prior arrangements where a lower suspension (i.e., spider) is directly connected to the voice coil. See, for example the comparison between Fig. 2a and Fig. 2b in Proni in this regard. Accordingly, Proni clearly teaches away from a speaker manufacturing process that includes “connecting a damper to the coil,” as recited in each of

independent claims 11 and 14. See, for example, col. 6, line 61 – col. 7, line 14 of Proni that explains why the prior art suspension system of its Fig. 2b is “at a mechanical disadvantage.”

Moreover, Proni does not teach or suggest “projecting a jig from a center hole of the center pole,” as recited in each of independent claims 11 and 14. The Office Action cites to reference numerals 40, 66 and 65 as meeting the claimed “jig” recitations in this regard. As discussed previously, reference numeral 40 is disclosed as a concentric tube that “is substantially cylindrical and depends from the bottom surface 12b of the diaphragm 12 so as to be concentrically positioned around the electromagnetic motor structure 26 and, hence, voice coil 20.” Col. 6, lines 1-5 of Proni. In other words, the concentric tube 40 completely surrounds, or straddles, the voice coil and magnetic circuitry. Accordingly, it does not project “from a center hole of the center pole” as recited in each of independent claims 11 and 14.

A brief look at Fig. 7C of the instant application, for example, showing a jig 14 projecting from a center hole of the magnetic circuit, compared with Fig. 5 of Proni, showing a concentric tube stabilizer straddling around the outside of the entire magnetic circuitry, voice coil and motor, clearly illustrates the differences between the arrangements and methodologies of Proni and those disclosed and claimed in the instant application.

Applicants respectfully submit that Proni’s disclosed concentric tube 40 and adaptor ring 60 are not removably connected with the diaphragm. While these portions serve as parts of the loudspeaker’s structure, they do not serve as a loudspeaker manufacturing tool, as is the jig of the instant application. Accordingly, Proni does not suggest “projecting a jig from a center hole of the center pole” or “engaging a positioning portion [member] provided on a diaphragm with the

jig to position the diaphragm at a predetermined position with respect to the center pole” in the manner recited in independent claims 11 and 14.

Nevertheless, in the interest of advancing prosecution in this application, Applicants have opted to amend each of independent claims 11 and 14 to differently describe the embodiments of the instant application’s methodology.

In particular, Applicants note that Proni was applied in the Office Action dated April 4, 2001 in the parent application (Serial No. 09/046,605) to the instant divisional application. Accordingly, amendments that generally parallel those that were implemented in the parent application have been made to independent claims 11 and 14. For example, features recited in the parent application’s claims such as the concepts of 1) the frame having a central hole and 2) the positioning portion being removably connected with a jig positioned in the central hole to secure the position of the diaphragm relative to the magnetic circuit during the installation have been added to each of independent claims 11 and 14. Moreover, each of claims 11 and 14 have been newly-amended to additionally recite that the “magnetic circuit is positioned around a central hole of the frame.” Accordingly, the combinations recited in newly-amended independent claim 11 and 14 clearly distinguish from the applied Proni reference.

For example, Applicants respectfully submit that their disclosed methodology involves inserting the jig 14 into the center pole through the central hole 9a to fix the damper 6 to the holder 3, as shown in Fig. 7B. On the other hand, Proni does not teach, or even suggest, its frame 18 having a central hole. Accordingly, Applicants respectfully submit that Proni does not teach or suggest the manufacturing methodology disclosed in the instant application, and recited in the currently pending claims.

With regard to the remaining rejections of the dependent claims 12 and 15 under 35 U.S.C. § 103(a), Applicants respectfully submit that these dependent claims are allowable at least for the same reasons as their respective independent claims, and that Sakamoto does not cure the deficiencies of Proni.

Accordingly, Applicants respectfully assert that the rejections under 35 U.S.C. §§ 102(b) and 103(a) should be withdrawn because Proni and Sakamoto, whether taken singly or combined, do not teach or suggest each feature of independent claims 11 and 14, as amended. As pointed out in MPEP § 2131, "[t]o anticipate a claim, the reference must teach every element of the claim." Thus, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. v. Union Oil Co. Of California, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987)." Similarly, MPEP § 2143.03 instructs that "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 409 F.2d 981, 180 USPQ 580 (CCPA 1974)." Furthermore, Applicants respectfully assert that dependent claims 12-13 and 15-16 are allowable at least because of the dependence from their respective independent claims and the reasons set forth above.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP

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By: 

Paul A. Fournier
Reg. No. 41,023

CUSTOMER NO. 009629
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Tel: 202-739-3000
Fax: 202-739-3001